DATASHEET

Enterasys® G3

Secure, Policy-based 10GbE Modular L2/L3/L4 Edge Switch

Versatile edge switch with modular 10 Gigabit XFP, Gigabit SFP, and 10/100/1000 PoE IOMs

Delivers Secure Networks architecture to the network edge

Multilayer switching and full Layer 3 routing with IPv6

High availability and high density Power over Ethernet

214Mpps and 384 Gbps capacity

Product Overview

The Enterasys® G3 combines the small size and cost-effectiveness of a stackable, with the modularity of a chassis, into a single standalone switch that supports convergence, compliance and connectivity needs. Ready to support the QoS priority and security needs of converged voice, video and data networks, the G3 is designed to support business-critical enterprise applications such as IP telephony, HD video conferencing, distance learning, business intelligence, ERP, CRM, and Internet connectivity. All this while ensuring only the right users have access to the right information from the right place at the right time for compliance purposes.

Delivering advanced Enterasys Secure Networks policy management capabilities, the Enterasys G3 series provides up to 96 ports of Gigabit Ethernet (GbE) connectivity in either 10/100/1000 Mbps RJ45 with integrated Power over Ethernet (PoE) options or 1 GbE ports via Small Form Factor Pluggable fiber-optic transceivers (SFP). As many as twelve 10 GbE ports are supported via Small Form Factor Pluggable fiber-optic transceivers (XFP).

Bandwidth, QoS and security policy control is offered for up to eight users per port based on L2/L3/L4 traffic visibility. In addition to L2 switching and standard IPv4 RIPv1/v2 support, optional firmware upgrades enable advanced IPv4 routing or IPv6 routing. The G3 inspects and classifies incoming traffic; discovers attached users, applications and devices; authenticates them using 802.1x, Web and/or MAC multi-user authentication; then enforces priority and security policies by making the filtering, forwarding or rate limiting decision.

The Enterasys G3 is integrated with the Enterasys Secure Networks architecture to offer granular control by user and application over priority and security parameters, while enabling full user mobility. The privileges for a user or device are enforced dynamically based on authentication results regardless of wired or wireless connectivity. The end result is an easier way to manage the networked infrastructure as an integrated system. This holistic approach leveraging Enterasys NetSight® centralized visibility and control management software avoids the need to manually reconfigure on a device-by-device basis every time there is a move, add or change.
Define the policies once, and Enterasys keeps up with all the mobility, expansion and modification automatically.

Benefits

Minimal Operator Intervention

- Patented Secure Networks visibility and control functions enable you to apply business-oriented user and application policies to create a self-managed, secure and high-performance network
- Unlike traditional technology-oriented port and VLAN ACL-based methods, you don't need to configure policies on a box-by-box basis using complex CLI commands. An intuitive GUI enables you to define the policies once, and regardless of the number of moves, adds or changes, have those user and application policies enforced automatically across the entire network

Edge Security & Access Control

- "What you need is what you get" policies allow you to proactively prevent security incidents and assure service level requirements by either rate limiting, prioritizing, denying, or quarantining traffic based on user privileges, application priority, or required protocols.
- Flexibility of three expansion slots supports any of the following IOMs:
  - 24 port 10/100/1000 RJ45 with dual SFP "combo" ports and ability to upgrade to PoE
  - 24 port 1 GbE SFP
  - 2 port 10 GbE XFP
  - 4 port 10 GbE XFP

Predictable Quality of Service

- Extensive controls for managing QoS by L2/L3/L4 traffic discovery, classification and prioritization
- High availability design through redundant cooling, hot swap field-replaceable power supplies, topology loop protection, link aggregation and mesh topology support

There is nothing more important than our customers.

Features

Security

- **Business-oriented policy-based** security by user, application, protocol, port or VLAN
- **Technology-oriented ACL-based** security by port or VLAN
- **Multiple User Authentication** via IEEE 802.1X, Web portal and/or MAC address simultaneously for up to 8 users/devices per port
- **Multiple User Quarantine** via RFC 3580 for up to 8 users/devices per port
- **Acceptable Use Policy** enforcement when deployed with NetSight
- **Rapid detection, isolation and remediation** of threats when deployed with NetSight and Dragon
- **Proactive Protection Services**
  – MAC address lockdown / lockout
  – Worm & virus quarantine
  – Source port pairing
  – ARP broadcast protection
  – BPDU port protection
  – DHCP service protection

Performance

- **Aggregate capacity:** G3 performs at wire speed per port and provides switching capacity up to 214 Mpps throughput and 384 Gbps bandwidth.
- **Address table size:** Up to 32,000 addresses are supported
- **Hardware queues:** Eight hardware queues per port are supported

Management

- **Secure Management:** Authenticated and encrypted SNMPv3 support in addition to SSHv2 and SSL
- **Policy support:** The G3 supports the creation of 31 profiles and 1536 unique policy rules per device. The use of 100 masks are possible per user role or profile and up to eight roles or profiles are supported per port.
- **Port mirroring:** Mirrors ingress traffic from switch port(s) to a local or remote device for further traffic analysis or compliance purposes
- **RMON:** provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** automated device discovery protocol for easy mapping by network management applications
- **Alias/Node Table:** Dynamically updated local directory of attached users and devices used to locate and resolve IP addresses to MAC addresses throughout the network

Convergence

- **LLDP-MED (Media Endpoint Discovery):** a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **IP multicast routing:** Optional Advanced Routing License supports PIM sparse mode
- **IP multicast snooping (data-driven IGMP):** automatically prevents flooding of IP multicast traffic

Connectivity

- **IEEE 802.3af Power over Ethernet:** provides up to 15.4 W per port to IEEE 802.3af compliant PoE powered devices such as IP phones, wireless access points, and security cameras
- **PoE power management:** prioritize which ports receive power and detect powered and non-powered end devices to enable attachment of PoE and standard Ethernet devices on a single switch.
- **Jumbo frames:** on Gigabit and 10-Gigabit ports enable high-performance remote backup and disaster-recovery services
- **IPv6 capable:** switch hardware is capable of supporting IPv6 host, routing, and filtering via an optional advanced routing license

High Availability

- **Virtual Router Redundancy Protocol (VRRP):** Requires optional G3 Advanced Routing License. VRRP allows creation of highly available routed environments
- **IEEE 802.1s Multiple Spanning Tree Protocol:** provides link high availability in multiple VLAN environments by allowing multiple spanning trees; encompasses IEEE 802.1D Spanning Tree Protocol and IEEE 802.1w Rapid Spanning Tree Protocol
- **IEEE 802.3ad Link Aggregation Control Protocol (LACP):** support up to 6 trunks, each with up to 8 ports per trunk
- **Hot-swappable** power supplies and SFP/XFP optics
- **Redundant power supplies and cooling**
- **Sparing simplicity:** common accessories (interface modules, power supplies)

Layer 2 switching

- **IEEE 802.1q VLAN support and tagging:** supports up to 1,024 VLANs simultaneously
- **GARP VLAN Registration Protocol:** allows automatic learning and dynamic assignment of VLANs

Layer 3 services

- **Layer 3 IP routing:** Static IP routing provides basic routing. RIP provides RIPv1 and RIPv2 routing at media speed for up to 512 IPv4 routes. Optional Advanced Routing License includes PIM, VRRP and OSPF2 which supports ECMP to provide link redundancy/scalable bandwidth and NSSA. IPv6 routing is supported via the optional IPv6 Routing License
- **UDP helper function:** UDP broadcasts can be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevent server spoofing for UDP services such as DHCP
- **Loopback interface address:** defines an address in RIP and OSPF that can always be reachable, improving diagnostic capability

Quality of Service (QoS)

- **Traffic classification at layer 2,3,4:** enables packet classification and tagging at the network edge based on any of the following attributes: MAC address, physical port, IP address, IP protocol, IP ToS/DSCP, TCP/UDP port and IP subnet.
- **Traffic prioritization:** allows real-time traffic classification into 8 priority levels mapped to eight hardware queues. Weighted round robin (WRR) and strict priority (SP) queuing are supported which keeps low priority traffic from being completely starved of bandwidth. Support for IP Differentiated Services Code Point (DSCP) enables the G3 to enforce requested service levels.

Standards and Protocols

Switching services protocols

IEEE 802.1d (MAC Bridges)

IEEE 802.1t (802.1d Maintenance)

IEEE 802.3ad (link Aggregation)

IEEE 802.1w (Rapid Reconvergence)

IEEE 802.3x (Flow Control)

IGMP Snooping v1, v2

Jumbo Frame support (9,216 bytes)

IP Helper Address

VLAN Support

IEEE 802.1Q VLAN

Tagged-based VLAN

Port-based VLAN

GVRP protocol

GARP

Quality of Service

IP DSCP

IP Precedence

Protocol

Source IP

Destination IP

Source MAC

Destination MAC

IP Routing & Multicast

Static routes

RIP v1, v2

ICMP

OSPF2 *(optional license)*

ARP & ARP Redirect

ARP Tables

Dynamic Table Size: 2024

Static Table Size: 512

PIM-SM *(optional license)*

DVMRP *(optional license)*

VRRP *(optional license)*

DHCP/BOOTP Relay

RFC & MIB Support

RFC 2338 - IP REDUNDANCY – VRRP *(optional license)*

RFC 1058 - RIP V1

RFC 2453 RIP V2

RFC 1583, RFC 2328 - OSPF2 *(optional license)*

RFC 826 - ARP, ARP REDIRCT

RFC 951, RFC 1542 - DHCP/BOOTP RELAY

RFC 2131, RFC 3046 - DHCP CLIENT/RELAY

RFC 2819 - RMON-MIB

RFC 1213, RFC12123-MIB/MIB II

RFC 1493 - BRIDGE-MIB

RFC 2674 -P-BRIDGE-MIB

RFC 2674-QBRIDGE-MIB VLAN BRIDGE MIB

IEEE 802.1X MIB - PORT ACCESS

RFC2620 - RADIUS ACCOUNTING CLIENT MIB

RFC 2618 AUTHENTICATION CLIENT MIB

RFC 1724 - RIP V2 MIB EXTENSION

RFC 1850 - OSPF V2 MIB (optional license)

RFC 2787 VRRP-MIB (optional license)

RFC 3289 -DIFFSERV-MIB

RFC 2933-IGMP MIB

RFC 2934 -PIM MIB FOR IPV4 *(optional license)*

ENTERASYS ENTITY MIB

ENTERASYS POLICY MIB

LLDP/LLDP-MED

Additional IEEE Standards

IEEE 802.3 Ethernet

IEEE 802.3u Fast Ethernet

IEEE 802.3ab Gigabit Ethernet, copper

IEEE 802.1x Network Access Control

IEEE 802.3z Gigabit Ethernet

IEEE 802.1s Multiple Spanning Trees

Specifications

	G3G124-24	G3G124-24P	G3G170-24
Description	24 port 10/100/1000 switch with three modular expansion slots (power supply not included)	24 port 10/100/1000 PoE switch with three modular expansion slots (power supply not included)	24 port SFP switch with three modular expansion slots (power supply not included)
Port	24 fixed RJ-45 10/100/1000 ports expandable to 96 (Type 10Base-T, Type 100Base-TX, Type 1000Base-T). Plus 2 combo SFP ports.	24 fixed RJ-45 10/100/1000 ports with PoE expandable to 96 (Type 10Base-T, Type 100Base-TX, Type 1000Base-T). Plus 2 combo SFP ports.	24 fixed SFP 1000Base-X/ 100FX ports expandable to 96 (SFP: Small Form-Factor Plug-in) transceivers for both fiber and copper connections. Does not support PoE cards.
Empty slots	Three empty slots for Input/Output Modules (IOMs)	Three empty slots for Input/Output Modules (IOMs)	Three empty slots for Input/Output Modules (IOMs)
Power supplies	Power supplies not included in base unit. Order separately, see Accessories section	Power supplies not included in base unit. Order separately, see Accessories section	Power supplies not included in base unit. Order separately, see Accessories section
Form Factor	Fixed modular, standalone	Fixed modular, standalone	Fixed modular, standalone
Memory and processor	256MB RAM 32MB flash memory	256MB RAM 32MB flash memory	256MB RAM 32MB flash memory
Performance			
Throughput	Up to 214 Mpps	Up to 214 Mpps	Up to 214 Mpps
Switching capacity	384 Gbps	384 Gbps	384 Gbps
Electrical			
PoE total power Class 3 (watts)	96 ports non-redundant, 48 ports redundant	96 ports non-redundant, 48 ports redundant	Up to 72 ports non-redundant with optional IOM Up to 24 ports redundant with optional IOM
PoE total power Class 2 (watts)	96 ports fully redundant	96 ports fully redundant	Up to 72 ports fully redundant with optional IOM
PoE power per port (watts)	15.4w for Class 3	15.4w for Class 3	15.4w for Class 3
IEEE 802.3af Compliant	Yes	Yes	Yes
Management	Netsight Policy Manager, Automated Security Manager (additional license); command line interface; web browser	Netsight Policy Manager, Automated Security Manager (additional license); command line interface; web browser	Netsight Policy Manager, Automated Security Manager (additional license); command line interface; web browser
Physical Specs			
Dimensions (HxWxD)	3.46x17.36x18.94in / 88x441x481mm	3.46x17.36x18.94in / 88x441x481mm	3.46x17.36x18.94in / 88x441x481mm
Net Weight (g/lb/Kg)	21.16lb / 9.598Kg	21.30lb / 9.662Kg	21.75lb / 9.866Kg
MTBF (Hrs)	119,152	107,645	134,153
Thermal Output (Volt-Amps)	54V-2.33A	54V-2.41A	54V-1.71A
Thermal Output (BTUs/Hr)	429.66	443.3	214.3338
Environmental Specifications			
Power requirements			
Input Voltage	100-240V AC	100-240V AC	100-240V AC
Input Frequency	50-60Hz	50-60Hz	50-60Hz
Input Current	1.7A-0.7A	1.8A-0.7A	1.71A
Power Consumption (watts)	126 W	130 W [Without PoE power draw]	92.18 W

Specifications (Cont.)

	G3G124-24	G3G124-24P	G3G170-24
Temperature			
Operating Temperature (C/F)	0-50°C / 32-122°F	0-50°C / 32-122°F	0-50°C / 32-122°F
Non-Operating/Storage Temperature (C/F)	-40-70°C / -40-158°F	-40-70°C / -40-158°F	-40-70°C / -40-158°F
Humidity			
Operating Humidity	5%-95%	5%-95%	5%-95%
Agency & Standards Specifications			
Standard Safety (UL)	UL/CB/LVD	UL/CB/LVD	UL/CB/LVD
Eletromagnetic compatibility			
Standard EMC	CE / FCC Class A / VCCI / C-Tick /BSMI	CE / FCC Class A / VCCI / C-Tick /BSMI	CE / FCC Class A / VCCI / C-Tick /BSMI
Vibration			
Operational Shock	ISTA 2A	ISTA 2A	ISTA 2A
Drop	ASTM D5276	ASTM D5276	ASTM D5276

IOMs

	G3G-24TX – 24 10/100/1000 port IOM with 2 Combo SFP ports	G3G-24SFP – 24 port 1000BaseX IOM	G3K-2XFP – 2 port 10GB IOM	G3K-4XFP – 4 port 10 GB IOM	G3G-POE – Power over Ethernet daughter card
Physical Specs					
Dimensions (HxWxD)	1.61x8.07x12.60in / 41x205x320mm	1.61x8.07x12.60in / 41x205x320mm	1.61x8.07x12.60in / 41x205x320mm	1.61x8.07x12.60in / 41x205x320mm	0.63x6.69x4.49in / 16x170x114mm
Net Weight (g/lb/Kg)	2.43lb / 1.1Kg	3.09lb / 1.4Kg	2.20lb / 1Kg	2.43lb / 1.1Kg	0.14lb / 0.064Kg
MTBF (Hrs)	354,653	394,524	343,139	246,568	1,114,579
Thermal Output (Volt-Amps)	54V-0.65A	54V-0.43A	54V-0.41A	54V-0.74A	54V-0.07A
Thermal Output (BTUs/Hr)	119.35	78.43	75.93	136.4	13.64
Environmental Specifications					
Power requirements					
Input Voltage	54V DC	54V DC	54V DC	54V DC	54V DC
Input Current	0.65	0.43	0.41	0.74	0.07
Power Consumption (watts)	35 W	23 W	22 W	40 W	4 W
Temperature					
Operating Temperature (C/F)	0-50°C / 32-122°F	0-50°C / 32-122°F	0-50°C / 32-122°F	0-50°C / 32-122°F	0-50°C / 32-122°F
Non-Operating/Storage Temperature (C/F)	-40-70°C / -40-158°F	-40-70°C / -40-158°F	-40-70°C / -40-158°F	-40-70°C / -40-158°F	-40-70°C / -40-158°F
Humidity					
Operating Humidity	5%-95%	5%-95%	5%-95%	5%-95%	5%-95%
Agency & Standards Specifications					
Standard Safety (UL)	UL	UL	UL	UL	UL
Eletromagnetic compatibility					
Standard EMC	CE / FCC Class A / VCCI / C-Tick /BSMI	CE / FCC Class A / VCCI / C-Tick /BSMI	CE / FCC Class A / VCCI / C-Tick /BSMI	CE / FCC Class A / VCCI / C-Tick /BSMI	CE / FCC Class A / VCCI / C-Tick /BSMI
Vibration					
Operational Shock	ISTA 2A	ISTA 2A	ISTA 2A	ISTA 2A	ISTA 2A
Drop	ASTM D5276	ASTM D5276	ASTM D5276	ASTM D5276	ASTM D5276

Ordering Information

Part Number	Description
Enterasys G3 secure switch	
G3G124-24	24 port 10/100/1000 switch with three modular expansion slots (power supply not included)
G3G124-24P	24 port 10/100/1000 PoE switch with three modular expansion slots (power supply not included)
G3G170-24	24 port SFP switch with three modular expansion slots (power supply not included)
Input Output Modules (IOM)	
G3G-24TX	24 10/100/1000 port IOM with 2 Combo SFP ports
G3G-24SFP	24 port 1000BaseX IOM
G3K-2XFP	2 port 10GbE IOM
G3K-4XFP	4 port 10 GbE IOM
G3G-POE	Power over Ethernet daughter card
Software License	
G3L3-LIC	Enterasys G3 Advanced IPv4 Routing License (OSPF, PIM, DVMRP, VRRP), Per Switch License
G3IPv6-LIC	Enterasys G3 IPv6 Routing License, Per Switch License
Accessories	
G3-PWR-POE	1200 watt power supply (requires 20amp circuit)
G3-PWR	400 watt power supply (requires 15amp circuit)
XFP Modules	
10GBASE-SR-XFP	XFP with 10-Gigabit Ethernet Short Reach (up to 33/82/300m on OM1/OM2/OM3 fiber) via LC connector
10GBASE-LR-XFP	XFP with 10-Gigabit Ethernet Long Reach (10KM over SMF) via LC connector
10GBASE-ER-XFP	XFP with 10-Gigabit Ethernet Extended Reach (40KM over SMF) via LC connector
10GBASE-ZR-XFP	XFP with 10-Gigabit Ethernet Extended Reach (80KM over SMF) via LC connector
10GBASE-CX4	XFP with 10-Gigabit interface,Twin Axial, Copper SFF-8470 via XFP connector (15m)
MGBIC Modules	
MGBIC-LC01	Mini-GBIC with 1000Base-SX via LC connector
MGBIC-LC03	Mini-GBIC with 1000Base-LX/LH (2KM Long Haul) MMF via LC connector
MGBIC-LC04	Mini-GBIC with 100Base-FX (up to 2KM) via LC connector
MGBIC-LC05	Mini-GBIC with 100Base-FX (up to 10KM) via LC connector
MGBIC-08	Mini-GBIC with 1000Base-LX/LH (70Km Long Haul) SMF via LC connector
MGBIC-LC09	Mini-GBIC with 1000Base-LX via LC connector
MGBIC-02	Mini-GBIC with 1000Base-T via RJ45 connector
MGBIC-MT01	Mini-GBIC with 1000Base-SX via MTRJ connector

Warranty

The Enterasys G3 comes with an advance replacement limited lifetime warranty that continues for 5 years after the date of product discontinuation. There is also a full software and firmware warranty to cover patches, bug fixes, and feature upgrades with 8 x 5 telephone support. For full warranty terms and conditions please go to http://www.enterasys.com/support/warranty.aspx

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

Contact Us

For more information, call Enterasys Networks toll free at 1-877-801-7082, or +1-978-684-1000 and visit us on the Web at enterasys.com

Thought Leadership
Over 500 global patents

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04/08

enterasys® Secure Networks™

Delivering on our promises. On-time. On-budget.